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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,982	06/30/2000	Minerva M. Yeung	042390.P7919	1443

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EXAMINER

SIMITOSKI, MICHAEL J

ART UNIT	PAPER NUMBER
2134	6

DATE MAILED: 02/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/608,982

Applicant(s)

YEUNG ET AL.

Examiner

Michael J Simitoski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-12, 17-19, 24-26 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 5-8, 13-16, 20-23 and 27-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


NORMAN M. WRIGHT
PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The IDS of 2/20/2001 was received and considered.
2. Claims 1-33 are pending.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. The term "relatively easy" in claims 4, 12, 19 & 26 is a relative term, which renders the claim indefinite. The term "relatively easy" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

5. The term "very difficult" in claims 4, 12, 19 & 26 is a relative term, which renders the claim indefinite. The term "very difficult" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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7. Claim 31 is rejected under 35 U.S.C. 102(b) as being anticipated by "Some Thoughts on Serial Numbers in Intel CPUs" by Rivest. Rivest discloses creating a customized identification (CID)/C1 (page 5 ¶4) which is at least partially a function of a platform key (PK)/Ki (page 4 ¶6) and receiving content in which signals to control whether the content is played/executed are embedded (page 5 ¶4) in the content (page 5 ¶5) and are knowable only to a system/user creating the CID/C1, but wherein a content provider does not have access to a value of PK/manufacturer (page 4 ¶1).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 2, 9, 10, 17 & 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Some Thoughts on Serial Numbers in Intel CPUs" by Rivest in view of "Protecting Digital Media Content" by Memon.

Regarding claims 1 & 9, Rivest discloses receiving remotely originating data/challenge c (page 5 ¶4), creating a customized identification (CID)/C1=C(c,r) which is at least partially created through encrypting the data/c (page 5 ¶4) as a function of a platform key/Ki (page 4 ¶6) and a random number/r of a computer system receiving the data (page 5 ¶4). Rivest suggests that this process is used to prevent piracy by controlling the usage of software (page 5 ¶5). Rivest discloses receiving the content and decrypting the CID/C1 (page 5 ¶4) and creating

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authentication comparison data (ACD)/result of 'decrypt and compare' (page 5 ¶4) which is at least partially created through decrypting data embedded in the CID/C1 (page 5 ¶4-5). Rivest does not include at least one watermark in which at least a part of the CID/C1 is embedded and lacks creating the ACD by decrypting data in the watermark. However, Memon discloses that watermarking is useful for ownership assertion and usage control, where a content provider (Alice) inserts an electronic watermark in the content, makes the watermarked data publicly available and later uses that to prove its ownership and disprove others' false claims of ownership (page 35 ¶1, page 36 Fig 1) or to limit use of data to specific recipients (page 36 ¶1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to embed the CID/signature in a watermark, to later extract the watermark and decode the CID/signature. One of ordinary skill in the art would have been motivated to perform such a modification to make content publicly available and assert ownership and to control the usage of the content, as taught by Memon (page 35 ¶1, page 36 Fig 1, page 36 ¶1).

Regarding claim 2 & 10, Rivest, as modified above, discloses the ACD/result being created through decrypting the CID/C1 (page 5 ¶4) in the content as a function of the PK/Ki (page 4 ¶6) and RN/r (page 5 ¶4), and the ACD/result being compared with the ROD/c and the content/software being allowed to be played/executed or not depending on the outcome of the comparison (page 5 ¶3-5).

Regarding claims 17 & 24, Rivest discloses providing data (RD)/c to be sent to a remote computer system/user (page 5 ¶4), receiving a customized identification (CID)/C1, which is a function of the RD/c (page 5 ¶4) and a platform key (PK)/Ki (page 4 ¶6) and a random number (RN)/r of a remote computer system/user and providing content/software to be sent to a remote

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computer system/user (page 5 ¶4-5). Rivest suggests that this process is used to prevent piracy by controlling the usage of software (page 5 ¶5), but Rivest lacks the content including at least one watermark in which at least part of the CID/C1 is embedded. However, Memon discloses that watermarking is useful for ownership assertion and usage control, where a content provider (Alice) inserts an electronic watermark in the content, makes the watermarked data publicly available and later uses that to prove its ownership and disprove others' false claims of ownership (page 35 ¶1, page 36 Fig 1) or to limit use of data to specific recipients (page 36 ¶1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to embed the CID/signature in a watermark and transmit the watermarked data to the user. One of ordinary skill in the art would have been motivated to perform such a modification to assert ownership and to control the usage of the content, as taught by Memon (page 35 ¶1, page 36 Fig 1, page 36 ¶1).

10. Claims 3, 4, 11, 12, 18, 19, 25 & 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rivest in view of Memon, as applied to claims 1, 9, 17 & 24 above, in further view of "On the Need for Image Dependent Keys for Watermarking" by Holliman et al. (Holliman).

Regarding claims 3, 11, 18 & 25, Rivest discloses a system, as modified above, but lacks first and second data sets. However, Holliman teaches that using a single key to watermark multiple documents is insecure, and to alleviate the key management problem, one can derive a watermark key (WK) from the image/first data set/c (page 9 §4) and embed the watermark/second data set using the derived key (page 3 Fig. 2). Therefore, it would have been

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obvious to one having ordinary skill in the art at the time the invention was made to use a content-dependent watermark in which to embed the CID. One of ordinary skill in the art would have been motivated to alleviate key management problems, as taught by Holliman (page 9 §4). As modified above, the second data set/content-dependent watermark/C1 may be extracted utilizing the WK/key (page 3 §2.1) and authentication comparison data (ACD)/C1, C2 (see Rivest page 4 ¶6-7), which is at least partially created through decrypting data embedded in the watermark (see Memon page 35 ¶1, page 36 Fig 1, page 36 ¶1).

Regarding claims 4, 12, 19 & 26, as best understood, Rivest, as modified above, discloses that the first data set/image-dependent information is relatively easy (restricted to two high order bits) (see Holliman page 9 §4) to extract from the content/image and the second data set/watermark is very difficult to extract without access to the first data set/content (see Holliman page 9 §4).

11. Claims 32 & 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rivest, as applied to claim 31, in view of Memon and in further view of Holliman.

Regarding claim 32, Rivest discloses a system as described above, but lacks first and second data sets and lacks disclosure of watermarks and the difficulty of extraction of the first and second data sets. However, Memon discloses that watermarking is useful for ownership assertion and usage control, where a content provider (Alice) inserts an electronic watermark in the content, makes the watermarked data publicly available and later uses that to prove its ownership and disprove others' false claims of ownership (page 35 ¶1, page 36 Fig 1) or to limit use of data to specific recipients (page 36 ¶1). Therefore, it would have been obvious to one

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having ordinary skill in the art at the time the invention was made to embed the CID/signature in a watermark and transmit the watermarked data to the user. One of ordinary skill in the art would have been motivated to perform such a modification to assert ownership and to control the usage of the content, as taught by Memon (page 35 ¶1, page 36 Fig 1, page 36 ¶1). As modified, Rivest lacks first and second data sets. However, Holliman teaches that using a single key to watermark multiple documents is insecure, and to alleviate the key management problem, one can derive a watermark key (WK) from the image/first data set/c (page 9 §4) and embed the watermark/second data set using the derived key (page 3 Fig. 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a content-dependent watermark in which to embed the CID. One of ordinary skill in the art would have been motivated to alleviate key management problems, as taught by Holliman (page 9 §4). As modified above, the second data set/content-dependent watermark/C1 may be extracted utilizing the WK/key (page 3 §2.1) and authentication comparison data (ACD)/C1, C2 (see Rivest page 4 ¶6-7), which is at least partially created through decrypting data embedded in the watermark (see Memon page 35 ¶1, page 36 Fig 1, page 36 ¶1).

Regarding claim 33, as best understood, Rivest, as modified above, discloses that the first data set/image-dependent information is relatively easy (restricted to two high order bits) (see Holliman page 9 §4) to extract from the content/image and the second data set/watermark is very difficult to extract without access to the first data set/content (see Holliman page 9 §4).

Allowable Subject Matter

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12. Claims 5-8, 13-16, 20-23 & 27-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter:

- a. Regarding claims 5, 13, 20 & 27, the prior art relied upon fails to teach or suggest a first data set/content including the CID/C1 and RN/r and the second data set/C1 including the ROD/c.
- b. Regarding claims 7, 15, 22 & 29, the prior art relied upon fails to teach or suggest the first data set/content including the ROD/c and RN/r and the second data set/C1 including the CID/c.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Simitoski whose telephone number is (703)305-8191. The examiner can normally be reached on Monday - Thursday, 6:45 a.m. - 4:15 p.m.. The examiner can also be reached on alternate Fridays from 6:45 a.m.–3:15 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on (703)308-4789.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, DC 20231

Or faxed to:

(703)746-7239 (for formal communications intended for entry)

Or:

(703)746-7240 (for informal or draft communications, please label 'PROPOSED' or 'DRAFT')

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA 22202, Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should
be directed to the receptionist whose telephone number is (703) 305-9000.



MJS

February 9, 2004


NORMAN M. WRIGHT
PRIMARY EXAMINER